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November 5, 2007

Ms. Marlene H. Dortch  
Secretary  
Federal Communications Commission  
445 12th Street, S.W.  
Washington, D.C. 20554

**NOTICE OF EX PARTE COMMUNICATION**

*Re:* CS Docket No. 97-80; PP Docket No. 00-67

Dear Ms. Dortch:

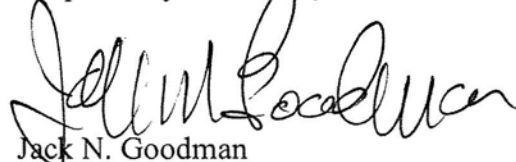
Last Thursday, November 1, 2007, André Kudelski, Jim Chiddix and Will Nixon, representing Nagravision USA, met with Chairman Kevin Martin, Catherine Bohigian and Clyde Ensslin to discuss the above-referenced proceedings.

They discussed technologies Nagravision has deployed in other countries, as well as the arguments made in Nagravision's comments. In particular, they reiterated Nagravision's desire to bring a low-cost, open set-top box solution to small cable operators and its request that its system be certified as compliant with Section 629 of the Act, 47 U.S.C. § 629.

Copies of Nagravision's comments and reply comments were provided to meeting participants and copies of those comments are attached.

Please direct any questions concerning this matter to the undersigned.

Respectfully submitted,



Jack N. Goodman

*Counsel for Nagravision USA*

WILMERHALE

Ms. Marlene H. Dortch  
November 5, 2007  
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Attachments

cc: The Honorable Kevin J. Martin  
Catherine Bohigian  
Clyde Ensslin

**Before the  
Federal Communications Commission  
Washington, D.C. 20554**

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In the Matter of	)	
	)	
Implementation of Section 304 of the	)	CS Docket No. 97-80
Telecommunications Act of 1996	)	
	)	
Commercial Availability of Navigation Devices	)	
	)	
Compatibility Between Cable Systems and	)	PP Docket No. 00-67
Consumer Electronics Equipment	)	
_____	)	

**COMMENTS OF NAGRAVISION USA**

Nagravision USA submits these comments on the Commission's *Notice of Proposed Rulemaking* in the above-referenced proceeding, seeking comments on the development of more capable security systems for digital cable systems, as well as asking about potential standards for non-cable Multi-channel Video Program Distributors (MVPDs).

Nagravision is one of the two largest independent suppliers in the world of conditional access systems and other content management tools for digital television providers.<sup>1</sup>

Nagravision is a major supplier of set-top boxes (STBs) to MVPDs both in and out of the United States. Overall, more than 70 million devices are in place and operating using Nagravision's conditional access technologies, including many large cable systems. Examples include Virgin Media in the United Kingdom, UPC in the Netherlands, Kabel Deutschland in Germany, Bell Canada's ExpressVu service, and Echostar's Dish Network in the United States. In many of these systems, STBs are sold at retail, encouraging competition and consumer choice. In some

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<sup>1</sup> Nagravision is a division of the Kudelski Group, a publicly traded company based in Switzerland.

systems, the STBs work with multiple service providers and, indeed, can be deployed with other competitive security systems. In addition, NagraVision technology is integrated in over 1000 different STB models by over 100 different consumer electronics (“CE”) and Original Design Manufacturers (“ODM”), further encouraging competition for the best price, performance and features.

NagraVision supplies many different types of conditional access systems. Its deployments include Cablecards, smartcards, and SIM cards.<sup>2</sup> Other low cost security form factors such as USB devices are in development. NagraVision’s worldwide variety and breadth of experience with conditional access systems far exceeds that of the two incumbent suppliers to U.S. cable systems.

All of NagraVision’s deployed conditional access systems are based on open standards. NagraVision is participating in the Alliance for Telecommunications Industry Solutions (ATIS) and other groups developing standards for telephone company Internet protocol-based video systems in the United States. NagraVision is, thus, in a position to provide assistance to MVPDs and equipment suppliers, or to supply equipment itself, to help achieve the Commission’s objectives of STBs that will work across several MVPD systems and thus foster their general commercial availability.

### **Existing Technologies Can Enable Bidirectional Navigation**

The Commission asks for comments in two areas: (1) proposed bidirectional standards for digital cable systems; and (2) the prospects for navigation devices that would function with different types of MVPDs and the timetable for achieving the goal of commercial availability of

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<sup>2</sup> NagraVision demonstrated a software-based downloadable security system to the FCC as part of the Comcast/NCTA demonstration of DCAS in July 2005. NagraVision was the only participant not using a STB from one of the two duopoly cable suppliers.

navigation devices for new types of MVPDs. Without addressing the specific merits of any proposal, Nagravision offers these comments on the technology now available to perform navigation and security functions in both existing and new MVPDs.

A sister company of Nagravision's<sup>3</sup> manufactures and sells Cablecards. In other markets, Nagravision has brought the price of Cablecards down to a fraction of the level currently being offered to U.S. MVPDs by the cable industry's incumbent suppliers. Content security in a STB or television receiver has two key building blocks:

- A secure key management and entitlement system that is the "root-of-trust" for the STB or IDTV: Authenticates and decrypts secure secret messages, determines which channels or programs each STB or IDTV is entitled to watch, and generates a descrambling key where appropriate. This building block only has to carry a very small bandwidth.
- A descrambler: A logic block that if presented with an encrypted signal and a valid descrambling key produces a "clear text" signal that any MPEG decoder can render as video. This descrambler needs to carry the full bandwidth of all decrypted streams.

U.S. Cablecards have the complexity and expense of both functions. Because the descrambling function does not have to be integrated with the security or "key" function, less complex separate security systems can be created. The Commission, therefore, can achieve the objectives of Section 629, including bidirectional capability, at less cost than the Cablecard proposals before it, and with greater reliance on open standards.

Moreover, despite the technical differences between existing cable systems and new IP video systems, cable technology will increasingly move towards two-way operation. The DCAS proposal indeed assumes that cable systems will move to a more interactive architecture. As that occurs, it will be more feasible to develop security and navigation systems that can function with different types of MVPDs based on existing technology deployed by Nagravision.

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<sup>3</sup> Smart DVT, a part of the Kudelski Group.

Nagravision has the skill to deploy such a flexible security system and is willing to work with industry associations to define a security system that can be deployed at low cost across multiple segments including cable and IPTV, yet allows CE companies a single common inexpensive implementation. That system would use a combination of *well proven* software downloads *and* physical renewability to ensure that the longevity of the security system last as long as the TV set or CE product.

**Nagravision Can Offer MVPDs Downloadable Security Systems that Satisfy Section 629**

As cable systems and other MVPDs move to all-digital, bidirectional security systems, the Commission should continue to confirm that specific technical solutions will achieve its goals in implementing Section 629, and its requirement for commercial availability of navigation devices. Without the certainty that Commission confirmation brings, MVPDs and manufacturers will be reluctant to invest in new technologies, either in rebuilding existing distribution systems, constructing new ones, or developing products for consumers and MVPDs. And, since MVPDs must meet already the separate security requirements the Commission has imposed even while standards for future solutions are under discussion, the Commission should continue to provide confirmation for new solutions so that MVPDs can upgrade their systems, deploy new systems, or expand their offerings.

Specifically, Nagravision has a fully-downloadable security system that satisfies the standards established by the Commission in the *Second Report and Order* in this proceeding.<sup>4</sup> Specifically, the Nagravision system will allow cable systems to move to all-digital platforms at significantly less cost than deploying STBs with Cablecard capability since the security function of the Nagravision system is downloaded to the STB and works with the network, rather than

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<sup>4</sup> *Commercial Availability of Navigation Devices*, 20 FCC Rcd 6794 (2005).

being hard-wired at the STB level. The Nagravision system will allow cable systems to deploy both one-way and interactive services, thus achieving the Commission's objectives of a separable security system that meets consumer demand for bidirectional security systems. *See Notice* ¶ 13.

The Nagravision system will not be proprietary to any MVPD. STBs acquired for one MVPD using the system will be functional on all others which use the Nagravision technology. The technology for this system is available on reasonable and non-discriminatory terms to MVPDs and to manufacturers of consumer equipment and STBs. The Nagravision system is, therefore, comparable in functionality to the Beyond Broadband Technology (BBT) system that the Commission found to be “a downloadable security solution which provides for common reliance.”<sup>5</sup> In contrast to the BBT system which was under development, the Nagravision technology is in existence and able to be deployed. The Commission can also have confidence that the Nagravision system “provides for common reliance” because of Nagravision's worldwide experience in developing and manufacturing conditional access systems. Nagravision also has successful experience in transitioning to and from different conditional access systems without service interruption, and – in conjunction with industry standard-setting bodies – can address CEA's concerns about the need for a common standard.

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<sup>5</sup> Public Notice, *Commission Reiterates that Downloadable Security Technology Satisfied the Commission's Rules on Set-Top Boxes and Notes Beyond Broadband Technology's Development of Downloadable Security Solution*, DA 07-51 (rel. January 10, 2007).

## **Conclusion**

Nagravision, therefore, requests that the Commission confirm, as it did for BBT, that cable systems deploying the Nagravision system as they move to an all-digital platform will be in compliance with Section 629. Nagravision stands ready to work with the Commission, industry standard-setting bodies, manufacturers, and MVPDs in developing new conditional access systems for all types of MVPDs.

Respectfully submitted,

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*Counsel for Nagravision USA*

August 24, 2007

**Before the  
Federal Communications Commission  
Washington, D.C. 20554**

In the Matter of	)	
	)	
Implementation of Section 304 of the	)	CS Docket No. 97-80
Telecommunications Act of 1996	)	
	)	
Commercial Availability of Navigation Devices	)	
	)	
Compatibility Between Cable Systems and	)	PP Docket No. 00-67
Consumer Electronics Equipment	)	
	)	

To: The Commission

**REPLY COMMENTS OF NAGRAVISION USA**

Nagravision USA submits this reply to the comments filed in the above-referenced docket. Nagravision in general supports the arguments made in comments filed by the Consumer Electronics Association (CEA) that Section 629 of the Communications Act, 47 U.S.C. § 629, requires the adoption of a standard for a security system for MVPDs which is national and interoperable in scope, and which is not under the control of a single affected industry. Nagravision has experience in other countries in the creation of such a standard, subject to open licensing, and is confident that, particularly as cable systems increasingly move to interactive program delivery, such a system can be developed through industry standard-setting bodies in the United States in a way that is agnostic to different industry segments.

Nagravision in other countries has developed and supplied security systems that are hardware-agile with respect to the set-top box. Nagravision has experience with two systems where the video provider changed its conditional access system – in one case moving to a Nagravision system and in the other away from a Nagravision system – without having to

replace customer hardware. Overall, NagraVision provides more than 60 licenses for conditional access technology to consumer electronics manufacturers, enabling their devices to work with multiple video providers. And, as is characteristic of NagraVision's business model – and distinct from the approach adopted by the primary suppliers of conditional access technology to U.S. cable systems – each of these licenses are for technology that is available on open licensing terms.

As CEA argues,<sup>1</sup> a “downloadable security” system that relies on one or more unique and potentially non-interoperable hardware and software solutions at the consumer interface level would not result in a system where common reliance will lead to the retail availability of navigation devices that is the objective of Section 629. While such systems, including the NagraVision system described in NagraVision's comments,<sup>2</sup> may provide an interim solution,<sup>3</sup> a standard that allows manufacturers to build equipment usable across many different MVPD platforms – developed with open standards and with a common licensing and certification process – must be the Commission's objective.<sup>4</sup>

Further, as CEA points out (Comments at 19), whatever standards are developed must allow for competing manufacturers to supply not only consumer equipment, but also whatever

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<sup>1</sup> CEA Comments at 14-15.

<sup>2</sup> NagraVision Comments at 4-5.

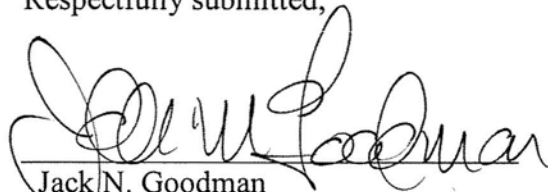
<sup>3</sup> As CEA recognizes (Comments at 13, 20), the adoption of standards for non-traditional cable systems may have to proceed on a different schedule.

<sup>4</sup> Unlike the BBT system that the Commission has already found to comply with the Act, the NagraVision system was not developed and controlled by an MVPD and is available from one of the world's largest suppliers of conditional access technology. Thus, it is ready to use in set-top boxes that could be usable across multiple MVPD systems. The Commission recently reiterated its conclusion that the BBT system, and others like it, will satisfy Section 629. *See Comcast Corp.*, FCC 07-127 (rel. Sept. 4, 2007), at ¶ 4 & n.20. NagraVision repeats its request that the Commission confirm that MVPDs deploying a NagraVision-supplied downloadable conditional access system will, at least for now, be in compliance with the Act.

security and navigation devices are supplied by MVPDs. Congress' goals will not be achieved if one or two manufacturers effectively have a monopoly on such devices and can, through their own separate standards, effectively prevent any competitor from entering the market. Tying MVPDs to one or two equipment manufacturers would harm consumers and MVPDs by reducing competition, increasing costs and deterring innovation.

Nagravision is ready and able to assist MVPDs and consumer electronics manufacturers in establishing standards for interactive navigation devices. It would be pleased to demonstrate to the Commission the systems it has developed in other countries that provide common reliance-based security functions for differing types of MVPDs using various form factors for the security component. Nagravision also is able to supply, as an interim measure, a downloadable, separate security system that provides for common reliance and achieves the Commission's objectives – at least in the short term – for compliance with Section 629.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Jack N. Goodman", is written over a horizontal line.

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September 10, 2007